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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,062	02/12/2007	Michael Hopkinson	70347	3537

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SYNGENTA CROP PROTECTION, INC.
PATENT AND TRADEMARK DEPARTMENT
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GREENSBORO, NC 27409

EXAMINER

BROWN, COURTNEY A

ART UNIT	PAPER NUMBER
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1616

NOTIFICATION DATE	DELIVERY MODE
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04/29/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

department-gso.patent@syngenta.com

Office Action Summary	Application No. 10/580,062	Applicant(s) HOPKINSON ET AL.	
	Examiner COURTNEY BROWN	Art Unit 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/30/2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Acknowledgement of Receipt/Status of Claims

This Office Action is in response to the amendment filed February 3, 2009.

Claims **1-12** are pending in the application and are being examined for patentability.

Rejections not reiterated from the previous Office Action are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set of rejections and/or objections presently being applied to the instant application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wichert et al. (US 6,890,889 B1) in view of Piper et al. (US 2005/0202972 A1) and further in view of Palgrave et al. (US 4,331,490).

Applicant's Invention

Applicant claims a pesticide concentrate comprising: a) 2-85% by weight water; b) 5-90% by weight of at least one pesticide; c) an amount of an ionic

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nitrate salt additive effective in reducing corrosion of metal surfaces and d) optionally, other formulation auxiliaries wherein the ratio of component c) to component b) is less than or equal to 0.3:1.

***Determination of the scope and the content of the prior art
(MPEP 2141.01)***

Wichert et al. teach herbicidal formulations comprising: (A) mesotrione (2-[4-methylsulfonyl-2-nitrobenzoyl]-L, 3-cyclohexanedione); (B) about 0.3 to about 2.5 percent of crop oil concentrate or about 0.3 to about 2.5 percent of methylated seed oil; (C) about 0.5 to about 5% of a urea ammonium nitrate on a volume to volume basis based on the total of (A), (B), (C), (D) and a diluent (abstract, claim 1 and 6 of instant application). Wichert et al. teach the use of water as the diluent component (column 2, line 32, and claims 1, 9 and 10 of instant application). Wichert et al. teach applying the aforementioned formulation to the locus of desired vegetation (column 3, lines 14-18, claim 9 of instant application) and the use of an additional herbicide, Acetochlor, formulated with mesotrione in a premix (column 2, line 58, claim 11 of instant application). Additionally, Wichert et al. teach the use of buffers to control pH (column 2, lines 32-41).

***Ascertainment of the difference between the prior art and the claims
(MPEP 2141.02)***

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The difference between the invention of the instant application and that of Wichert et al. is that the instant invention requires the use of a metal chelate of mesotrione as opposed to mesotrione. For this reason, the teaching of Piper et al. is joined. Piper et al. teach a herbicidal composition comprising a metal chelate of a 2- (substituted benzoyl)-1, 3-cyclohexanedione and an organic phosphate, phosphonate or phosphinate adjuvant (abstract, claims 1, 3, and 7 of instant application). Wichert et al., in an example, teach the use of mesotrione copper salt (Table 2, claim 7 of instant application). Additionally, Wichert et al. teaches the use of urea ammonium nitrate ([0050], claims 1 and 6 of instant application).

Another difference between the invention of the instant application and that of Wichert et al. is that the instant invention requires the use of a formulation that is a concentrate as opposed to being silent. For this reason, the teaching of Piper et al. is again joined. Piper et al. teach the use of a herbicidal composition that is a pre-mix concentrate and a suspension concentrate in a liquid carrier such as water ([0041] and [0043], claims 1 and 9 of instant application).

A final difference between the invention of the instant application and that of Wichert et al. is that the instant invention requires the optional use of a formulation auxiliary in the form of an alkali metal or alkaline earth metal chloride as opposed to being silent. For this reason, the teaching of Palgrave et al. is joined. Palgrave et al. teach the use of inorganic additives such as hexametaphosphate and sodium metavanadate in ammonium nitrate

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suspensions (column 3, lines 22-45, claims 1, 4, and 5 of instant application) that may be used in pesticide formulations (column 5, lines 17- 21).

Finding of prima facie obviousness

Rationale and Motivation (MPEP 2142-2143)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of the cited references to arrive at a pesticide concentrate comprising water, a metal chelate of mesotrione, and an ionic nitrate salt additive effective in reducing corrosion of metal surfaces. One would have been motivated to make this combination in order to receive the expected benefit of having pesticide concentrate that can easily be stored and handled and has improved selectivity due to the use of the chelate form of mesotrione as opposed to the unchelated form (Piper et al. [0005]). "It would be prima facie obvious to combine compositions each of which is taught by the prior art to be useful for the same purpose in order to form a resultant composition that is to be used for the very same purpose; the idea of combining them flows logically from their having been individually taught in prior art." **In re Kerkhoven, 205 USPQ 1069 (C.C.P.A. 1980).**

In reference to claims 1 and 2, a composition that consists of the same components (i.e. water, a metal chelate of mesotrione and an ionic salt additive) will possess the same properties and therefore lead to identical, desired results. Products of identical chemical composition can not have mutually exclusive

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properties." A chemical composition and its properties are inseparable.

Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. **In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658(Fed. Cir. 1990).**

All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

Therefore, the claimed invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made because every element of the invention has been fairly suggested by the cited reference.

Examiner's Response to Applicant's Remarks

Applicant's arguments filed on February 3, 2009 have been fully considered but they are not persuasive. Applicant argues that the focus of the Wichert and Piper teachings are herbicide formulations which are final formulations actually applied to the field and the present invention relates to aqueous pesticidal concentrates having reduced corrosion properties. Therefore, Applicant concedes that neither Wichert nor Piper is related, per se, to having reduced corrosion properties and that it is considered unlikely that one of ordinary skill would consider such references with regard the subject matter of

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the present invention. Applicant argues that the Examiner has merely chosen to adopt - and combine - these references in hindsight having had the benefit of the present invention. However, the Examiner disagrees because the teachings of Wichert and Piper meet the limitations of the claimed invention because the claims are composition claims and the reduced corrosion properties are not given weight because it is an intended use. The intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See **In re Casey, 152 USPQ 235 (CCPA 1967)** and **In re Otto, 136 USPQ 458, 459 (CCPA 1963)**. Additionally, the Examiner points to claim 12 of the instant application wherein Applicant claims a method for selective control of pests in crops of useful plants comprising treating said useful plants, their seeds, or the crop area thereof with the instantly claimed composition. Therefore, the focus of the Wichert and Piper teachings and claimed invention are the same. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See **In re McLaughlin, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971)**.

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Applicant argues that the formulation of the present invention and that taught by Wichert are very different. For example, with regard to the **"preferred"** formulations taught by Wichert, it can be seen that a typical 379 liter formulation contains 1 kg of mesotrione and 5.7 liters of urea ammonium nitrate (UAN). Thus, Applicant concedes that the teaching of Wichert suggests to one of ordinary skill a formulation in which mesotrione is present at 0.26% by weight and teaches UAN to be present at 1.5 % v/v and the amount of mesotrione present in the formulation envisaged by Wichert is nearly 20 times less than that of the formulation of the present invention as recited in claim 1 (5 - 90%). However the Examiner disagrees because Applicant claims the use of a mesotrione metal chelate and the teaching of Piper et al.(US Patent Application 2005/0202972 A1) was joined to show that the use of a mesotrione metal chelate in an amount of 0.5 to as much as 95% (see [0041] of Piper et al.) in a concentrate comprising urea ammonium nitrate was known at the time of the instant invention. Further, the Examiner wants to remind Applicant that when considering a prior art reference, the teaching of the **whole reference** is considered, not just preferred embodiments.

Lastly, Applicant argues that the ratio of component c) to component b) is less than or equal to 0.3:1 which means that, with regard to the formulation of the present invention, there is less ionic nitrate salt additive (component (c)) present in the formulation than pesticide (component (b)). Therefore, Applicant concedes that the teaching of Wichert has significantly more nitrate in the solution compared to pesticide. The Examiner agrees. However, Applicant

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claims the use of a metal chelate of mesotirone and the teachings of Piper et al.(US Patent Application 2005/0202972 A1) was joined to show that the use of a mesotrione metal chelate in an amount of 0.5 to as much as 95% (see [0041] of Piper et al.) in a concentrate comprising urea ammonium nitrate was known at the time of the instant invention.

Therefore, the claimed invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made because every element of the invention has been fairly suggested by the cited reference.

The claims remain rejected.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory

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action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR Only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Courtney Brown, whose telephone number is 571-270-3284. The examiner can normally be reached on Monday-Friday from 8 am to 4:30 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Mina Haghighatian/
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